

PATENT APPLICATION
DOCKET NO.: 10015052-1

LISTING OF THE CLAIMS

Pursuant to 37 C.F.R. §1.121, provided below is a listing of the claims, claims 1-29.

Claims 1-16 are canceled without prejudice or limitation.

17. (Currently Amended) A method for managing utilization of a unidirectional stack, comprising ~~the steps~~:

initializing a fixed stack marker, a stack base and a stack pointer for said unidirectional stack;

initializing a high water mark for tracking said stack pointer's location during execution of a program in a computing environment, said high water mark operating to identify said stack pointer's farthest location from said stack base ~~upon completion of said program's execution, wherein said farthest location is indicative of how far said stack has grown at any time during said program's execution;~~

upon fetching a program instruction to be executed in said computing environment, determining if said program instruction is operable to modify said stack pointer's current location to a new location in said unidirectional stack;

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if so, further determining whether said new location is within a predetermined stack range; and

providing a warning upon determining that said new location is not within said predetermined stack range.

18. (Original) The method for managing utilization of a unidirectional stack as set forth in claim 17, wherein said predetermined stack range comprises a region bounded by said stack base and said stack marker.

19. (Original) The method for managing utilization of a unidirectional stack as set forth in claim 17, wherein said predetermined stack range comprises a region bounded by said stack base and said high water mark.

20. (Original) The method for managing utilization of a unidirectional stack as set forth in claim 17, wherein said computing environment comprises an architectural simulator operable to simulate a target hardware platform.

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21. (Original) The method for managing utilization of a unidirectional stack as set forth in claim 20, wherein said target hardware platform is selected from the group consisting of a symmetric multiprocessing system, an asymmetric multiprocessing system, a loosely-coupled multiprocessing system, and a tightly-coupled multiprocessing system.

22. (Original) The method for managing utilization of a unidirectional stack as set forth in claim 17, further comprising the step of returning control to a user upon determining that said new location is not within said predetermined stack range.

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23. (Currently Amended) A system for managing utilization of a unidirectional stack, comprising:

means to initialize a fixed stack marker, a stack base and a stack pointer for said unidirectional stack;

means for tracking said stack pointer's location during execution of a program in a computing environment, said means operating to identify said stack pointer's farthest location from said stack base ~~upon completion of said program's execution,~~
wherein said farthest location is indicative of how far said stack has grown at any time during said program's execution;

means for determining if a program instruction is operable to modify said stack pointer's current location to a new location in said unidirectional stack; and

means for providing a warning upon determining that said new location is not within a predetermined stack range associated with said unidirectional stack.

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24. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 23, wherein said predetermined stack range comprises a region bounded by said stack base and said stack marker.

25. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 24, wherein said region includes said stack marker's location.

26. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 23, wherein said computing environment comprises an architectural simulator operable to simulate a target hardware platform.

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27. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 26, wherein said target hardware platform is selected from the group consisting of a symmetric multiprocessing system, an asymmetric multiprocessing system, a loosely-coupled multiprocessing system, and a tightly-coupled multiprocessing system.

28. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 23, wherein said predetermined stack range comprises a region bounded by said stack base and a high water mark identified by said means for tracking said stack pointer's location.

29. (Original) The system for managing utilization of a unidirectional stack as set forth in claim 28, wherein said region includes said high water mark.